



US Army Corps
of Engineers
Rock Island District



DTIC FILE 100

DEFINITE PROJECT REPORT
FOR
SECTION 14
EMERGENCY STREAMBANK PROTECTION

AD-A198 703

NORTH RACCOON RIVER
IOWA STATE HIGHWAY 7 BRIDGE
IN
BUENA VISTA COUNTY, IOWA

DTIC
ELECTE
AUG 22 1988
E D

FEBRUARY 1988

This document has been approved
for public release and sale; its
distribution is unlimited.

88 8 22

REVISED MAR 88



DEPARTMENT OF THE ARMY
ROCK ISLAND DISTRICT, CORPS OF ENGINEERS
CLOCK TOWER BUILDING - P O BOX 2004
ROCK ISLAND, ILLINOIS 61204-2004

CENCR-PD-F (1105-2-10b)

MEMORANDUM FOR: CDR, CENCD-PD-PF (DIXON) CHICAGO, ILLINOIS 60605-1592

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

1. INTRODUCTION

a. The following letter report is a summary of a study made on providing emergency streambank protection along the left descending bank of the North Raccoon River to curtail erosion which is endangering the east approach roadway, abutment wingwall, and deck of the Iowa State Highway 7 bridge in Buena Vista County, Iowa.

b. The proposal for emergency streambank protection presented in this report recommends the placement of riprap on rock bedding along approximately 375 linear feet of the left downstream bank of the North Raccoon River. The total estimated cost for the project is \$33,900, with a benefit-to-cost ratio of 17.3. The project satisfies the criteria for Federal participation and is recommended for construction. *Keywords: Flood control, water resources*

keywords: Flood control, water resources,
Army Corps of Engineers, (Sino)F.

2. STUDY AUTHORITY

The authority for this study is Section 14 of the 1946 Flood Control Act, as amended by the Water Resources Development Act of 1986. The authority, as amended, states:

That the Secretary of the Army is authorized to allot from any appropriations heretofore or hereinafter made for flood control, not to exceed \$12,500,000 per year, for the construction, repair, restoration, and modification of emergency streambank and shore-line protection works to prevent damages to highways, bridge approaches, public works, churches, hospitals, schools, and other nonprofit public services, when in the opinion of the Chief of Engineers such work is advisable: Provided, that no more than \$500,000 shall be allotted for this purpose at any single locality from the appropriations for any one fiscal year.



3. STUDY SCOPE

The study area as shown on plate 1 (encl 1) is located on the North Raccoon River, sec. 13, T. 90 N., R. 36 W., Providence Township, about 2 miles west of Newell, in Buena Vista County, Iowa. The Iowa Department of Transportation lists the Highway 7 bridge over the North Raccoon River as Maintenance No. 1126-1S007.

Codes
and/or
ial

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

4. DETAIL OF INVESTIGATION

This Definite Project Report contains sufficient detail to allow approval of the project and initiation of the preparation of plans and specifications.

5. PRIOR STUDIES AND REPORTS

No previous studies have been made for the specific problem area identified in this report by the Rock Island District, U.S. Army Corps of Engineers.

6. PROBLEMS AND NEEDS

a. The Iowa Department of Transportation, by letter dated March 20, 1986, requested assistance for erosion control along the east bank of the North Raccoon River, an area extending for approximately 375 linear feet upstream from the Highway 7 bridge, to protect the east approach roadway, abutment wingwall, and bridge deck from failure. Pursuant to this request, a field investigation was conducted by representatives of the Rock Island District with Iowa Department of Transportation officials on July 15, 1986, to assess the extent of the erosion and to determine if the problem could qualify for a study under the Section 14 authority.

b. It was determined after the initial site investigation was conducted that the bridge approach roadway, abutment wingwall, and deck were not in immediate danger of failure. However, it was foreseeable that any future flooding on the river could cause enough additional erosion to then place these facilities in imminent danger of failure. Nevertheless, the Iowa Department of Transportation officials were informed that a study could be made to determine the economic feasibility of providing erosion protection as soon as the Rock Island District could schedule it into its workload, possibly at the beginning of calendar year 1987. The Iowa Department of Transportation officials agreed to keep the Corps informed of any changes in the existing site conditions.

c. The Rock Island District subsequently requested higher Corps authorities for funds to study the erosion problem on January 9, 1987. The District received study funding from higher Corps authorities on June 5, 1987.

d. On June 23, 1987, the Rock Island District informed the Iowa Department of Transportation that a study was being initiated to determine the economic feasibility of protecting the endangered facilities under the authority of Section 14 of the 1946 Flood Control Act, as amended.

e. In an effort to keep the Corps abreast of any changes in the erosion conditions at the study site, the Iowa Department of Transportation informed the Rock Island District during the progress of the Section 14 study that the study area received a 12-inch rainfall in July 1987. This rainfall eroded

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

an additional 10 feet of riverbank and placed the erosion dangerously close (within 50 linear feet) of the centerline of the highway, encroaching into the approach roadway embankment of the bridge.

f. It is due to this recent change in site conditions that the District Engineer has now determined that damage to a major highway bridge approach, abutment wingwall, and bridge deck is imminent without immediate action.

7. EXISTING CONDITIONS

a. The erosion area, as shown on plate 2 (encl 1), extends from the upstream face of the east abutment of the Highway 7 bridge to a point approximately 375 linear feet upstream along the left downstream bank of the North Raccoon River. The existing eroded riverbank measures an average of 8 feet in height above the river channel bottom. A typical section of the riverbank is shown on plate 3 (encl 1).

b. The land situated just to the east of the eroded bank contains an old river channel meander which, over the period since the highway was constructed, has partially filled in with dirt, leaving some overland impressions of the old channel which fill up with water during rains and overbank flooding events, weakening the soil through over-saturation. In recent years, the erosion has been moving toward this old river meander area and slightly downstream into the area surrounding the upstream face of the east abutment wingwall and approach roadway embankment to the bridge. During the course of this erosion movement, a considerable accretion of earthen materials has occurred in the streambed, forming a point bar which is presently blocking off the right downstream one-half of the river channel directly opposite the eroded left downstream riverbank.

c. Iowa Department of Transportation officials reported to the Corps in their letter dated March 20, 1986, that the erosion in the study area has been occurring historically at the rate of about 3 feet of advancement per year. However, the Iowa Department of Transportation officials recently reported during the progress of the Section 14 study that heavy rains in the study area during July 1987, caused considerably more erosion which has now positioned the erosion within 50 feet of the centerline of highway.

d. It is due to this most recent site condition change that failure of the bridge approach roadway, abutment wingwall, and deck is considered to be imminent.

e. The Highway 7 bridge is listed by the Iowa Department of Transportation as being a continuous I-beam span, approximately 90 feet long by 24 feet wide. It facilitates a wide range of vehicle types and is considered to be a major transportation route. The traffic count on the highway in the study area is 1,850 vehicles per day.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

8. FUTURE CONDITIONS WITHOUT A PROJECT

Without a project to curtail the erosion, it is most likely that the next upcoming rainfall events, like those which occur during the spring each year and produce high water on the river, will cause enough damage to fail the east approach roadway, abutment wingwall, and bridge deck and close the bridge to traffic. This bridge closure would mean a 12-mile detour for all motorists.

9. PLANNING OBJECTIVES

a. National Objective. The plan formulation process to accomplish erosion damage reduction is formulated and directed by a national planning objective consistent with protecting the Nation's environment, pursuant to national environmental statutes, applicable executive orders, and other Federal planning requirements.

(1) Water and related land resources project plans should be formulated to alleviate problems and take advantage of opportunities in ways that contribute to this objective.

(2) Contributions to the National Economic Development - (NED) are increases in the net value of the national output of goods and services, expressed in monetary units. Contributions to NED are the direct benefits that accrue in the planning area and the rest of the Nation, and include increases in the net value of those goods and services that are marketed, and those that may not be marketed.

b. Specific Objectives.

(1) To prevent economic losses resulting from the closure of the Highway 7 bridge in Buena Vista County, Iowa.

(2) To preserve and enhance, when practical, existing natural ecological systems and cultural resources and to minimize adverse impacts of flood damage reduction measures on these resources.

10. PLANNING CONSTRAINTS

a. This study is constrained by all laws of the United States and by the State of Iowa, all executive orders of the President, and all engineering regulations of the Corps of Engineers.

b. This study is also constrained by the study authority as stated in paragraph 2 of this report.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

11. ALTERNATIVES CONSIDERED

Riprap Protection, Concrete-Filled Mattress, and No Action all were considered as alternatives to control the erosion at the study site. Of these alternatives, Riprap Protection was chosen as the selected plan because it was considered to exhibit the best combination of cost effectiveness and reliability in conjunction with minimizing environmental disruption. Riprap Protection is the NED plan.

12. SELECTED PLAN

The selected plan is to excavate approximately 800 cubic yards of accreted earthen material from a point bar area in the stream, as shown on plate 2 (encl 1), and to use it to fill in the eroded left downstream bank of the river to bring the river back to its original alignment. The project area extends from the upstream face of the east abutment of the bridge to a point approximately 375 linear feet upstream. The fill material will be graded and shaped to provide a uniform slope of 1 vertical on 2 horizontal. A 6-inch-thick layer (approximate 175 tons) of rock bedding material will be placed on the graded slope to serve as a foundation for the placement of a 12-inch-thick layer of riprap (approximately 350 tons). An 18-inch-thick by 5-foot-wide blanket of riprap will be placed along the base of the riprapped slope for toe protection. A trench 4 feet thick by 4 feet wide by 25 feet long and filled with riprap, as shown on plate 3 (encl 1), will be provided on the upstream end of the riprapped streambank to guard against undercutting. These two items amount to approximately 200 tons of riprap. All fill areas and other areas disturbed by the construction of the project will be seeded with reed canary grass. The total estimated volume of rock and other materials to be placed below the calculated ordinary high water (O.H.W.) elevation of 1257.0 (U.S.G.S. datum) is 625 cubic yards, which equates to 1.6 cubic yards per linear foot of riverbank. The finished project will be physically and chemically stable and noncontaminating.

13. HYDRAULIC ANALYSIS AND RIPRAP DESIGN

a. Flow Analysis. Flow-frequency relationships shown on plate 4 (encl 1) were developed for the study area by analyzing peak flow records at the North Raccoon River gage (station no. 05482300) at Sac City, Iowa. A bank-full flow of 1,800 cubic feet per second (a 2-year event) was used for the analysis. The velocity for this flood event is 5 feet per second.

b. Shear Analysis. A shear analysis for riprap design thickness on a 1 vertical on 2 horizontal slope revealed that a 12-inch layer of riprap should provide more than adequate protection from future erosion at the study site. Using this thickness and a stone density of 165 pounds per cubic foot results in an average stone diameter of 0.58 foot. The local boundary shear exerted on the riprap for this riprap design was calculated to be 0.31 pound per

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

square foot. Using a nonuniform flow factor of 1.5, the local boundary shear used for the design will be $(1.5)(0.31) = 0.47$ pound per square foot. The design shear for a 12-inch layer of riprap on a slope of 1 vertical on 2 horizontal and an average stone diameter of 0.58 foot was calculated to be 1.71 pounds per square foot.

c. Riprap Design. The required riprap design gradation was determined in accordance with procedures in EM 1110-2-1601 and ETL 1110-2-120. The following is the required minimum riprap gradation:

<u>Percent Lighter by Weight</u>	<u>Limits of Stone Wt., lbs.</u>
100	86-35
50	26-17
15	13-5

Any riprap placed under water should be at a thickness of 18 inches. The riprap blanket should extend beyond the toe of the bank. The ends of the blanket should extend beyond the limits of the existing erosion. A 6-inch layer of rock bedding should be provided under the riprap. Experience at similar projects indicates that Iowa Class "D" stone at a thickness of 18 inches in lieu of the 12-inch riprap on 6-inch bedding, also will provide adequate protection at this site.

d. Ordinary High Water (O.H.W.) Elevation. The O.H.W. elevation corresponds to the 25 percent duration flow. The 25 percent duration flow at the Sac City, Iowa, gage was determined from an analysis of mean daily flow records. Transferring that flow to the study site using the method mentioned in the flow analysis results in a 25 percent flow of 150 cubic feet per second. Using a normal depth analysis, an ordinary high water elevation of 1257.0 (U.S.G.S. datum) was determined.

14. ENVIRONMENTAL ANALYSIS

a. As previously stated, the project area is the east bank of the North Raccoon River, an eroded area extending approximately 375 feet from the upstream face of the Iowa State Highway 7 bridge approximately 2 miles west of the town of Newell, in southeastern Buena Vista County, Iowa. The erosion is threatening the east approach roadway, abutment wingwall, and the bridge deck. Opposite the eroded area, a point bar has formed from accreted sediments.

b. No woody vegetation is present in the project area, and land use adjacent to both banks is agricultural. The point bar of accreted materials, which is proposed to be used as borrow for the project, is overgrown with reed canary grass (Phalaris arundinacea), as are the riverbanks upstream from the study area. The existing eroded bank slope in the study area is steep and bare and is void of any reed canary grass cover.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

c. There are no federally listed endangered species reported for Buena Vista County. The proposed project is therefore anticipated to have no effect on any federally listed endangered species. Concurrence with this determination by the U.S. Fish and Wildlife Service can be found in a Record of Telephone Conversation (encl 2, Pertinent Correspondence).

d. The District Engineer has determined that damage to the Highway 7 bridge over the North Raccoon River is imminent without immediate action. The time needed to prepare and process documentation required by the National Environmental Policy Act risks the failure of the bridge. The proposed project is therefore exempted from the requirements of the act (200-2-2; 33 CFR 230). Any environmental benefits identified have already been included in the proposed project design. The expenditure of Federal and possible local sponsor monies to mitigate project impacts is not considered warranted. Therefore, there is no benefit identified with producing additional NEPA documentation.

e. These same time constraints also allow an exemption from processing which is normally required under Section 404 of the Clean Water Act (paragraph 4-7; ER 1105-2-50). Therefore, a Section 404(b)(1) Evaluation will not be prepared and a Section 404 Public Notice will not be issued. Certification under Section 401 of the act is not exempted and has been obtained from the Iowa Department of Natural Resources, Water Quality Planning Section, by letter dated November 3, 1987 (encl 2, Pertinent Correspondence).

f. Fill material used to shape the eroded bank will be covered with bedding stone overlain with riprap and will be physically and chemically stable and noncontaminating. The riprapped bankline will create a more stable and hospitable environment for aquatic organisms than the existing eroding bankline provides. The cracks, crevices, and undersurfaces of the proposed riprap will provide attachment sites and shelter and feeding areas for invertebrate organisms and small fish.

g. Borrow for shaping the eroded bank will be taken from the accreted point bar on the opposite bank, thus restoring the channel to its original alignment. After borrow activities have ceased, the opposite bank will be graded to a 1 vertical on 2.5 horizontal slope and seeded with native reed canary grass. Reed canary grass is being recommended to stabilize the bankline because this grass dominates the bankline under its existing conditions.

h. In compliance with the Fish and Wildlife Coordination Act, project plans have been coordinated with the U.S. Fish and Wildlife Service and the Iowa Department of Natural Resources, Fish and Wildlife Division. Project plans also were coordinated with the U.S. Environmental Protection Agency. Records of Telephone Conversations with these agencies can be found in encl 2, Pertinent Correspondence.

i. The proposed project would not encourage development in the floodplain and is in compliance with Executive Order 11988, Floodplain Management.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

j. The point bar opposite the eroded bank, which will be the borrow source for the proposed project, may be classified as a wetland. It has been determined that there is no practicable alternative which would prevent the loss of the point bar. If the proposed project involved only the protection and the restoration of the eroded bankline to its original alignment, the point bar of accreted materials would be a restriction in the river channel and the fluvial processes of the stream would erode the point bar away, causing sedimentation impacts downstream. Excavation of the point bar is advisable in order to regain channel capacity and to minimize any downstream sedimentation impacts. The proposed project is therefore in compliance with Executive Order 11990, Protection of Wetlands.

k. Studies conducted under the authority of Section 14 of the Flood Control Act of 1946, as amended, were not selected for review by the State of Iowa under Executive Order 12372, State Single Point of Contact. Therefore, the study is being coordinated with the Governor's Designated Representative for Civil Works, which is the Iowa Department of Natural Resources.

15. CULTURAL RESOURCES

Rock Island District archeologists conducted an archeological reconnaissance survey of the proposed project area on July 15, 1986. A walkover survey of the area, combined with careful inspection of the eroding bankline, failed to identify any significant historic properties. The Iowa State Historic Preservation Officer (SHPO), by letter dated August 1, 1986, concurred that no National Register quality sites would be impacted by the proposed project.

16. REAL ESTATE REQUIREMENTS

The proposed project to riprap approximately 375 linear feet of the east eroding bank of the North Raccoon River would require a permanent easement of 0.74 acre for the wet pastureland adjacent to the eroding bank. The project also requires a temporary construction easement of 2.2 acres for the wet pastureland on the east bank and cropland along the west bank in the project area. The gross estimate for these easements includes the value of lands, improvements, damages, relocation assistance (PL 91-646), contingencies, and acquisition costs.

The estimated cost of acquisition includes: mapping, title evidence, appraisal, negotiating, attorney fees, audits, and other clerical expenses to the cooperating agency. The estimate is as follows:

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

Lands, Improvements and Damages	\$ 600
Contingencies	100
Cost of Acquisition	300
Relocation Assistance	<u>0</u>
Total	\$1,000

17. ECONOMIC ANALYSIS

a. Purpose. The purpose of the economic analysis is to study the feasibility of providing Federal action to prevent further riverbank erosion in Buena Vista County, Iowa, which is occurring along the east bank of the North Raccoon River just upstream from the Iowa Highway 7 bridge crossing. The bridge approach roadway, abutment wingwall, and deck are presently in imminent danger of being damaged and/or removed by the bank erosion. The analysis evaluates two types of benefits that could result from proposed Federal actions: (1) savings in construction costs, and (2) savings in detour costs. The benefits are compared with the costs of providing the Federal action proposed to eliminate the bank erosion.

b. Description of the Problem. The erosion occurs primarily during high water and has been occurring at the rate of about 3 feet per year. Presently, the stream has meandered easterly, as shown on plate 2 (encl 1). As previously indicated in paragraphs 6e and 7c of this report, area flooding during July 1987 removed an additional 10 feet of riverbank in the study area, placing the approach roadway, abutment wingwall, and bridge deck in imminent danger of failure. As also indicated, it is expected that the next high water event on the river in the study area will remove portions of the bridge abutment wingwall and undermine the highway approach roadway and bridge deck.

c. Results of No Federal Action. The results of no Federal action provide two bases for the derivation of benefits: (1) construction costs needed to replace facilities removed by the erosion, and (2) detour costs represented by the traffic interrupted by the bridge reconstruction.

d. Construction Costs. The cost to the Iowa Department of Transportation of replacing the damaged bridge approach roadway, abutment wingwall, and deck, is estimated to be approximately \$50,000. This cost was considered to be a construction benefit. The method of deriving the benefit is illustrated in table 1, using an 8-5/8 percent interest rate and a 50-year project life.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

TABLE 1

Construction Benefits

<u>Cost of Construction (\$)</u>	<u>Number of Years to Present Time</u>	<u>Present Worth Factor</u>	<u>Cost of Construction - Year 1987 (\$)</u>	<u>Annual Cost Equals Benefit (\$)</u>
50,000	1	.9206	46,030	4,035

rounded 4,000

e. Detour Costs. Detour benefits are derived from detour costs. These costs are represented by the increased length of travel and length of time required by the detour, and the additional costs represented by maintenance required by the detour. Should the bridge fail, the estimated time that the detour will be used would be 90 days. Route location used for the detour is shown on plate 5 (encl 1). Information regarding vehicular costs per mile of travel was obtained from a brochure produced by the U.S. Department of Transportation, dated 1984, and was updated to current time.

Another type of detour loss is the opportunity cost to the vehicle operator when extra time is required to use the detour. The value of time was assumed to be represented by the median age as reported by the U.S. Bureau of Census for Buena Vista County.

The method for deriving detour costs is shown in table 2.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

TABLE 2

Detour Costs

<u>Vehicle Type</u>	<u>Extra Miles Traveled</u>	<u>Average Number of Trips per Day</u>	<u>Miles per Day</u>	<u>Miles per Year</u>	<u>Vehicle Costs Per Mile (\$)</u>	<u>Total Costs Per Year (\$)</u>
Cars	12	1,341	16,092	5,857,488	0.14	820,048
Trucks	12	470	5,640	2,052,960	0.39	800,654
School Buses	12	3	36	13,104	0.39	5,111
Mail Trucks	12	3	36	13,104	0.14	1,835
Large Trucks	12	<u>33</u>	396	<u>144,144</u>	0.75	<u>108,108</u>
Total		1,850		8,080,800		1,735,756
Opportunity Costs						<u>525,252</u>
Total Vehicle and Opportunity						2,261,008

Opportunity costs were developed using the median wage reported for Buena Vista County. The median wage reported for the year 1983 for the county was \$7.78 per hour. This figure was divided by 3 to allow for possible detour time used when opportunity loss was not involved. Therefore, the value of extra time was assumed to be 2.59 (\$7.78/3). The detour time required was based upon the assumption that vehicles would average 40 miles per hour. This amounts to 0.025 hour per mile, which, when multiplied by \$2.59, equals \$0.065 per mile. The resulting opportunity cost per year is \$525,252 (0.065 x \$8,080,800).

In addition to vehicle loss, another detour loss is represented by the added costs for maintaining the routes used by the detoured traffic. Costs for additional road wear and tear, such as adding road surfacing and making road repairs, occur from the added use of roads. The annual value of these costs can be equated to detour benefits. The methods of computing detour benefits are given in table 3. A 90-day interruption of traffic was assumed.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

TABLE 3

Detour Benefits

Year of Loss	Detour Loss to Vehicles (\$)	Number of Years to Present Time	Present Worth Factor	Present Worth Detour Loss (\$)	Cost of Maintaining Detour Road (\$)	Present Worth Roadway Costs (\$)
1988	559,040 ^{1/}	1	.9206	514,653	56,000	51,554
Capital Recovery Factor				.08765		.08765
Annual Equivalent Benefits				45,109		4,519
Total Detour Benefit						49,628
						rounded 49,600

^{1/} \$2,261,008 from table 2 multiplied by $\frac{90}{364}$

f. Agricultural Losses. There are no cropland or agricultural structures involved with the erosion; therefore, agricultural loss was not included in the analysis.

g. The Cost of Federal Action. Federal action involves grading and sloping the riverbank and placing riprap on rock bedding along approximately 375 linear feet of riverbank to curtail the erosion. Costs include locating, excavating, transporting, and placing the construction materials. Construction costs were computed and are illustrated in table 4.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

TABLE 4

Estimate of Construction Costs
(March 1988 Price Levels)

Item	Qty	Unit	Unit Cost (\$)	Costs (\$)	
				Federal	Non-Federal
Site Preparation	375	L.F.	5.00	1,900	
Excavation	800	C.Y.	4.00	3,200	
Bedding (6" thick)	175	TON	20.00	3,500	
Riprap (slope - 12" thick)	350	TON	22.00	7,700	
Riprap (toe - 18" thick)	200	TON	22.00	4,400	
Seeding	1	A.C.	1,000	1,000	
Real Estate					1,000
Subtotal				21,700*	1,000
Contingencies				4,200	
Subtotal				25,900	
E&D				3,000	
S&A				4,000	
* Non-Federal Cost				1,000	
Total Project Cost				33,900	

h. Annual Costs. Annual costs were computed as shown in table 5.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

TABLE 5

Annual Costs

<u>Description</u>	<u>First Cost (\$)</u>	<u>Annual Cost (\$)</u>
Construction	33,900	
Interest During Construction	<u>244</u>	
Total	34,144	2,992
Annual Cost (.08765 x 34,144)		
Annual Operation & Maintenance		
Cost of Riprap	12,100	
Assume 1/2 replaced every 25 yrs.		
Pw ₂₅ x 6,050 x .08763		
= .1264 x 6,050 x .08765		67
TOTAL ANNUAL COSTS		3,059 rounded 3,100

i. A summary of "with" and "without" conditions and the resulting benefits versus costs is shown in table 6.

TABLE 6

Summary of Results

<u>Description</u>	<u>With Project Conditions Annual Costs (\$)</u>	<u>Without Project Conditions Annual Benefits (\$)</u>
Detour Benefits		49,600
Project Costs	<u>3,100</u>	<u>4,000</u>
Totals	3,100	53,600

Benefit-to-Cost Ratio = $\$53,600 \div \$3,100 = 17.3$

18. COST APPORTIONMENT

a. Recent legislation passed by Congress and signed by the President of the United States requires that all construction of Section 14 projects awarded after October 1, 1986, be cost-shared between the Federal Government and the non-Federal project sponsor. Project cost-sharing is in accordance

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

with Public Law 99-662 of the Water Resources Development Act of 1986 and is designed to provide consistency among projects and programs and equity among sponsors of comparable works.

b. Under these provisions, the non-Federal project sponsor is to provide without cost to the Government, during the period of construction, all lands, easements, rights-of-way, and dredged material disposal areas, and perform all relocations and alterations of buildings, utilities (except those which pass under or through the line of protection), highways, railroads, bridges (except railroad bridges), sewers, and related and special facilities determined by the Government to be necessary for the construction of the project. To the extent that any of the lands, easements, or rights-of-way provided are already owned as part of the facility or structure being protected, the value of such interests shall not be included in the total project costs, nor credited toward the project sponsor's required project contribution.

c. If the value of the above allowable contributions represents less than 25 percent of the total project costs, the project sponsor shall provide during the period of construction an additional cash contribution in the amount necessary to make its total contribution equal to 25 percent of the total project costs. The project sponsor is also required to contribute all project costs in excess of the Federal statutory limitation of \$500,000. The cost apportionment for this project is shown in table 7:

TABLE 7

Cost Apportionment (\$)

Non-Federal Apportionment

25 Percent State (I.D.O.T.) Share	8,475
Less Credit (Lands, Easements, Rights-of-Way, etc.)	<u>- 1,000</u>
Cash Payment Required	7,475

Federal Apportionment

Total Project Costs	33,900
Less Non-Federal Share	<u>- 8,475</u>
Total Federal Cost	25,425

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

19. PLAN IMPLEMENTATION

a. Corps of Engineers. This report will be processed for approval of the selected plan of action and the authorization of funding for construction. Upon approval and appropriation of funding by the office of the Chief of Engineers, the Rock Island District will be responsible for the preparation of plans and specifications and the construction of the project.

b. Coordination. Details of the proposed project have been coordinated with the following Federal, State, and local agencies:

Iowa Department of Transportation
Iowa State Historic Preservation Officer
Iowa Department of Natural Resources
U.S. Fish and Wildlife Service
U.S. Environmental Protection Agency

c. State of Iowa, Department of Transportation. In compliance with Section 221 of Public Law 91-611, the State will, prior to construction of the project, enter into an agreement (Local Cooperation Agreement) with the Government whereby the State pledges to act as sponsor for the project and carry out the following responsibilities:

(1) Provide, without cost to the Government, during the period of construction, all lands, easements, rights-of-way, and dredged material disposal areas, and perform all relocations and alterations of buildings, utilities, highways, railroads, bridges (other than railroad bridges) sewers, and related facilities necessary for construction of the project. To the extent that any of the lands, easements, or rights-of-way provided under this paragraph are already owned as part of the facility or structure being protected, the value of such interests shall not be included in the total project costs nor credited toward the State of Iowa's required project contribution.

(2) Make a cash payment of not less than 5 percent of the total project costs during the period of construction, regardless of the value of the items in paragraph (1) above. If the value of the allowable contributions provided under paragraph (1) above represents less than 25 percent of the total project costs, the State shall provide during the period of construction an additional cash contribution in the amount necessary to make its total contribution equal to 25 percent of the total project costs.

(3) Contribute all project costs in excess of the Federal statutory limitation of \$500,000.

(4) Hold and save the Government free from all damages arising from the construction, operation, and maintenance of the project, except for damages due to the fault or negligence of the Government or its contractors.

CENCR-PD-F

SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

(5) Operate, maintain, replace, and rehabilitate the project upon completion in accordance with regulations or directions prescribed by the Government.

(6) Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, approved January 2, 1971, in acquiring lands, easements, and rights-of-way for construction and subsequent operation and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said act.

(7) Comply with Section 601 of Title VI of the Civil Rights Act of 1964 (Public Law 88-352), and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations, as well as Army Regulation 600-7, entitled: "Non Discrimination on the Basis of Handicap and Programs and Activities assisted or conducted by the Department of the Army."

(8) Grant the Government a right to enter, at reasonable times and in a reasonable manner, upon land which the State owns or controls for access to the project, or for the purpose of inspection, and, if necessary, for the purpose of completing, operating, repairing, maintaining and rehabilitating the project. If an inspection shows that the State, for any reason, is failing to complete, operate, repair, maintain or rehabilitate the project in accordance with the assurances hereunder, the Government will send a written notice to the State. If the State persists in such failure for thirty (30) calendar days after receipt of the notice, then the Government shall have a right to enter, at reasonable times and in a reasonable manner, upon land that the State owns or controls for access to the project for the purpose of completing, operating, repairing, maintaining and rehabilitating the project. No completion, operation, repair, maintenance, or rehabilitation by the Government shall operate to relieve the State of responsibility to meet its obligations as set forth in the Agreement, or to preclude the Government from pursuing any other remedy at law or equity to assure the faithful performance pursuant to the Agreement.

The State is willing and able to pay its share of the total project costs. Sufficient funds are on hand or can be raised quickly, and the cash payment can be deposited directly with the Government, or in an escrow account, upon demand by the Government.

The estimated total non-Federal share consists of \$1,000 for real estate costs plus a cash contribution of \$7,475. It is anticipated that the State will have to invest \$67 annually to replace lost riprap during the 50-year project life.

CENCR-PD-F

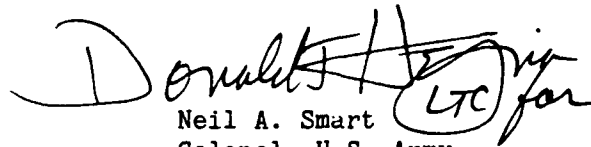
SUBJECT: Definite Project Report for Section 14 Emergency Streambank Protection, North Raccoon River, Iowa State Highway No. 7 Bridge, Buena Vista County, Iowa

20. RECOMMENDATION

I recommend that the plan selected herein to provide bedding rock and riprap material to protect the State Highway 7 bridge from erosion by the North Raccoon River in Buena Vista County, Iowa, be authorized for implementation as a Federal project with a total cost to the United States presently estimated at \$25,425.

3 Encls

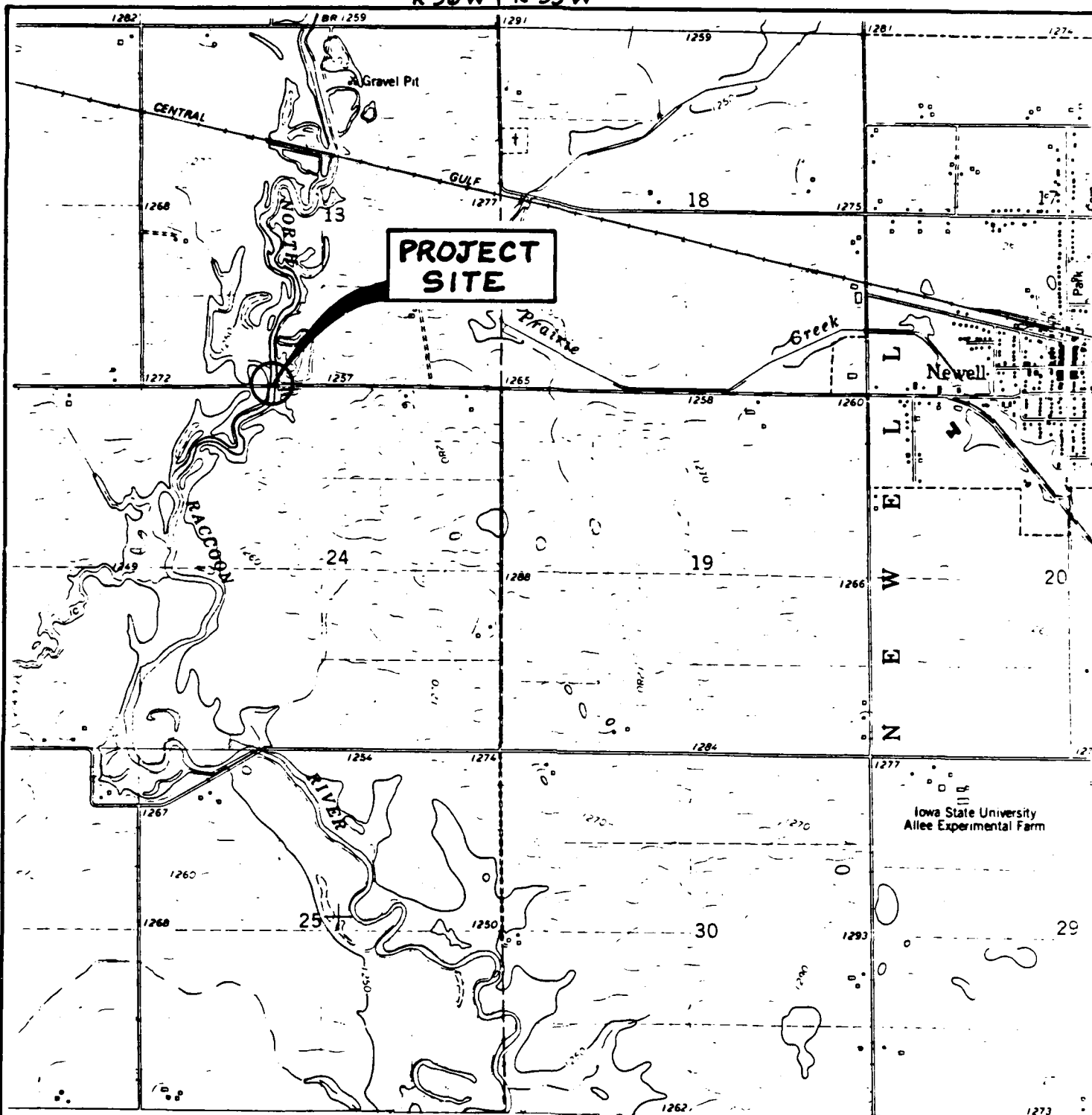
1. Plates
2. Pertinent Correspondence
3. Distribution List

 LTC for

Neil A. Smart
Colonel, U.S. Army
District Engineer

PLATES

R-36 W | R-35 W



0 0.5 1.0
SCALE IN MILES

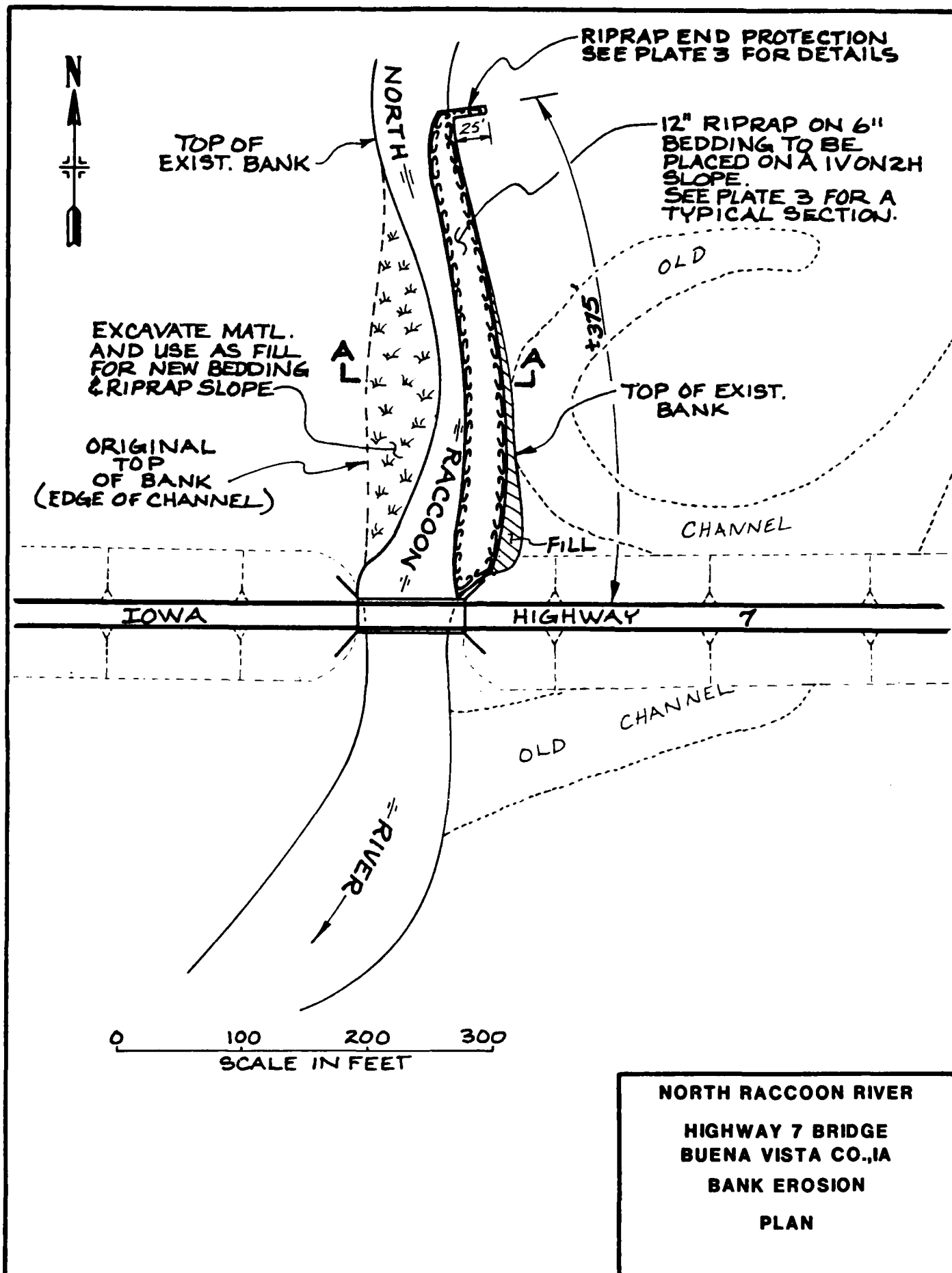


VICINITY MAP

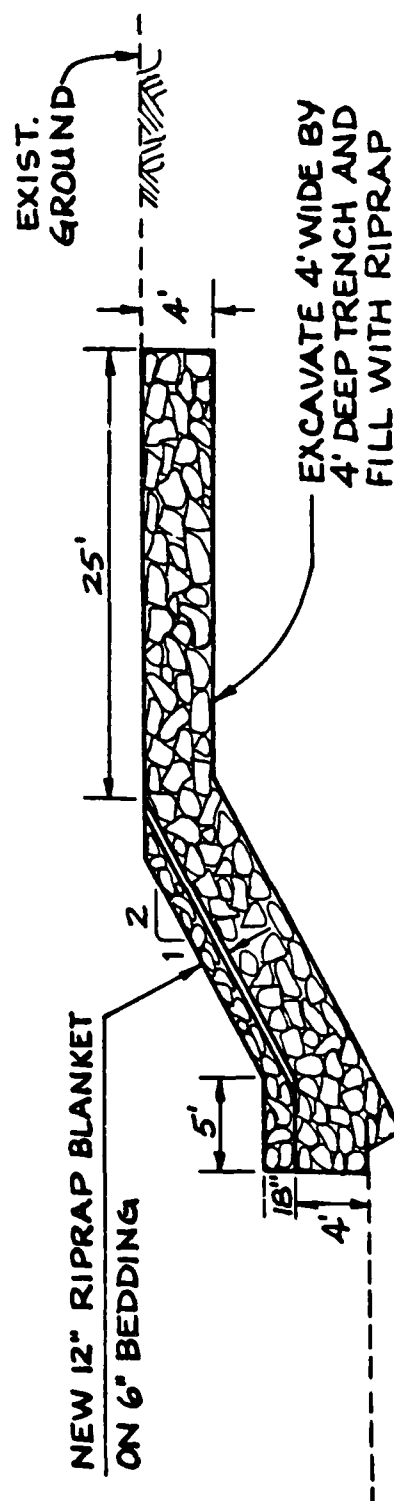
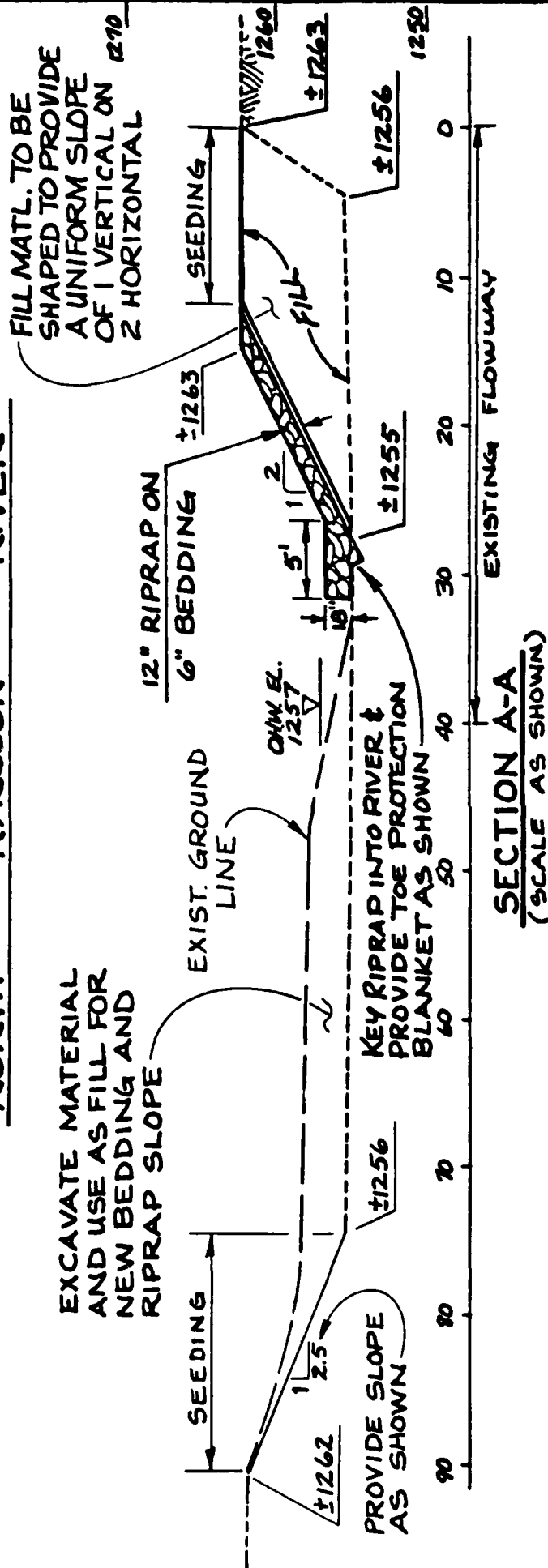
NORTH RACCOON RIVER

**HIGHWAY 7 BRIDGE
BUENA VISTA CO., IA**

GENERAL STUDY LOCATION

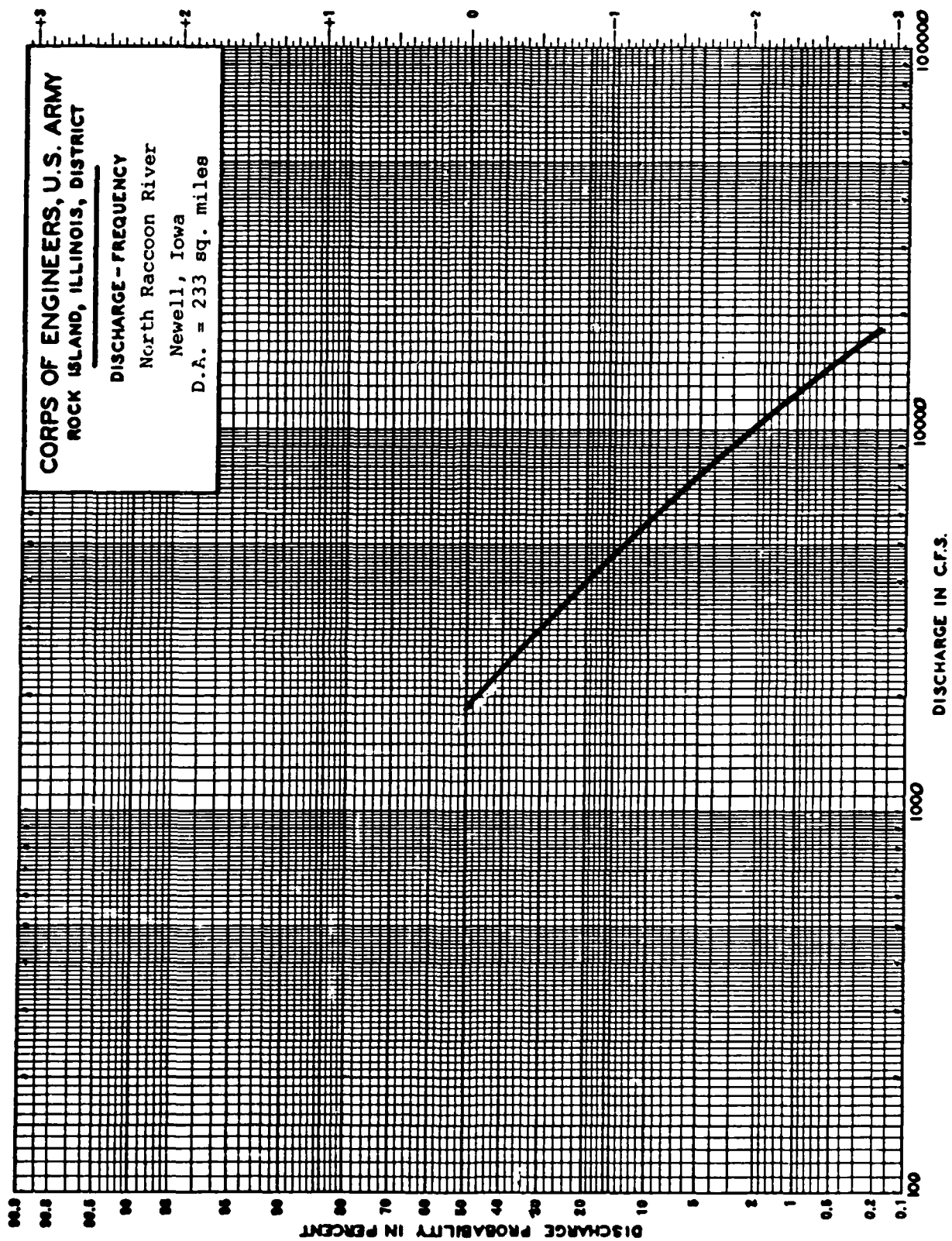


NORTH RACCOON RIVER



TYPICAL END PROTECTION
(NO SCALE)

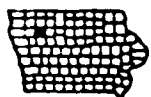
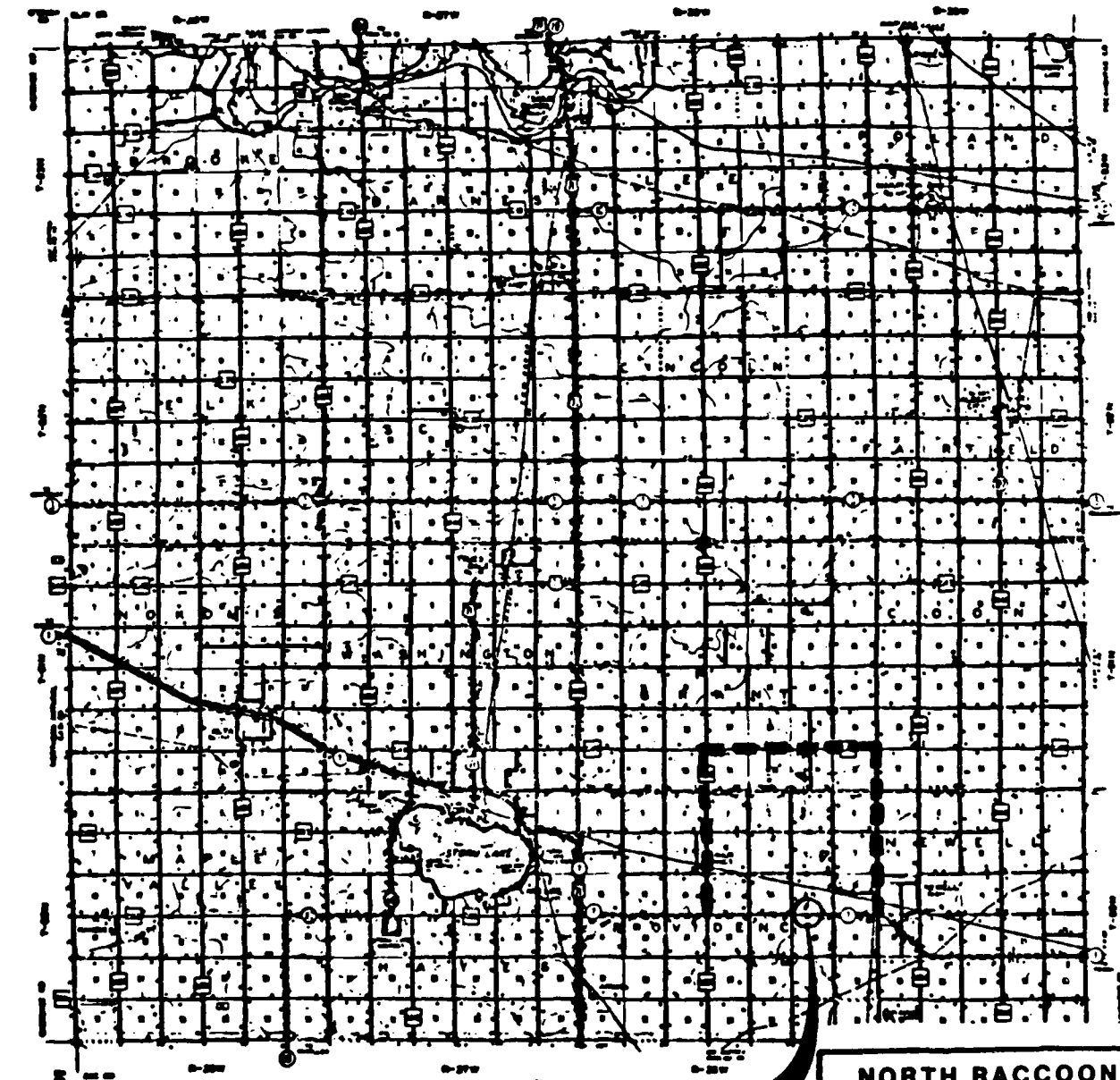
NORTH RACCOON RIVER
HIGHWAY 7 BRIDGE
BUENA VISTA CO., IA
TYPICAL SECTION



GENERAL HIGHWAY AND TRANSPORTATION MAP
BUENA VISTA COUNTY
IOWA

IOWA STATE HIGHWAY COMMISSION
U.S. DEPARTMENT OF TRANSPORTATION
FEDERAL HIGHWAY ADMINISTRATION
HIGHWAY PLANNING SURVEYS DEPARTMENT

1972



**PROJECT
SITE**

**NORTH RACCOON RIVER
HIGHWAY 7 BRIDGE
DETOUR ROUTE
FOR
ECONOMIC ANALYSIS**

DETOUR ROUTE - - - -

PERTINENT CORRESPONDENCE



Iowa Department of Transportation

2800 E. Gordon Drive, P.O. Box 987, Sioux City, Iowa 51102-0987
712/276-1451

March 20, 1986

Ref. No. 521.1

District Engineer
Attn: Planning Division
U.S. Army Corps of Engineers District
Clock Tower Building
P.O. Box 2004
Rock Island, Illinois 61204-2004

Dear Sir:

The Iowa Department of Transportation, under the provisions of Section 14 of the 1946 Flood Control Act, is requesting assistance from the Corps of Engineers in a problem of streambank erosion control. The problem is located in Buena Vista County on Iowa Highway No. 7 approximately two (2) miles west of Newell. The problem involves erosion of the streambank of the Raccoon River into the east abutment and roadway berm of an 84' x 24' steel beam bridge. The erosion occurs primarily during high water and is occurring at the rate of two (2) to three (3) feet of advancement per year over about the last five (5) years. The erosion has reached our right-of-way line which is sixty (60) feet from the centerline of Highway No. 7.

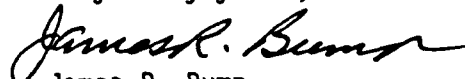
Enclosed for your information is a sketch of the problem area along with a part of a county map that indicates the actual site location. Also enclosed are photographs that somewhat indicate the magnitude of the problem. The 1984 traffic on this particular section of highway is 1,870 vehicles per day.

If this erosion is allowed to continue unabated, it will eventually cause the loss of this bridge as well as the pavement through this area. The severing of this main traffic artery through this area will cause out-of-distance travel and inconvenience to the residents and to the through traffic.

If you need additional information to justify an initial investigation of this problem, please advise. The contact person for this will be:

James R. Bump, District Engineer
Iowa Department of Transportation
P.O. Box 987
Sioux City, Iowa 51102-0987
Telephone: 712/276-1451

Very truly yours,


James R. Bump
District Engineer

IOWA STATE HISTORICAL DEPARTMENT
OFFICE OF HISTORIC PRESERVATION

DAVID CROSSON, EXECUTIVE DIRECTOR

AUG 01 1988

STATE HISTORIC PRESERVATION OFFICER

Dudley M. Hanson, P.E.
Acting Chief, Planning Division
Rock Island District Corps of Engineers
Clock Tower Building
P.O. Box 2004
Rock Island, IL 61204-2004

RE: EMERGENCY BANK STABILIZATION PROJECTS IN
HARDIN, BUENA VISTA, AND CARROLL COUNTIES

Dear Mr. Hanson:

Based on the information you provided, we find the proposed project to have no effect upon known historic or other cultural resources. Therefore, we recommend project approval.

However, if the proposed project work uncovers an item or items which might be of archeological, historic or architectural interest, or if important new archeological, historic or architectural data come to light in the project area, the work should be delayed for sufficient time to notify this office in order that the significance of the discovery can be determined.

Should you have any questions or if we can be of further assistance to you, please contact Dr. Kay Simpson, Chief, Archeological Surveys, at 515-281-8744 or Mr. Ralph Christian, Chief, Architectural Surveys, at 515-281-8697.

Sincerely,



David Crosson
State Historic Preservation Officer

/mdd



TERRY E. BRANSTAD, GOVERNOR

DEPARTMENT OF NATURAL RESOURCES

LARRY J. WILSON, DIRECTOR

November 3, 1987

Dudley M. Hanson
Chief Planning Division
U.S. Army Corps of Engineers
Rock Island District
Clock Tower Building
Rock Island, IL 61204-2004

RE: Request for 401 Certification
Dredging and bank protection - N. Raccoon River
Highway 7, Buena Vista County, Iowa

Dear Mr. Hanson:

This Department has received and reviewed the request for State certification pursuant to Section 401 of the Clean Water Act. State Section 401 certification is required for the issuance of the Corps of Engineers Section 404 permit. Section 401 certification is this Department's concurrence that the project is consistent with Iowa's Water Quality Standards.

This letter certifies, subject to the following conditions, that this Department has determined that there is reasonable assurance the proposed activity will be conducted in a manner which will not violate water quality standards of the State of Iowa. A Flood Plain Construction Permit is needed from this Department by the sponsor of the project (Iowa Department of Transportation).

Conditions:

1. The soil erosion potential for areas disturbed during construction shall be minimized. The applicant shall be responsible for planning and supervision during project construction to ensure erosion is minimized. Appropriate construction techniques and cleanup procedures needed for temporary erosion control and prevention of any other incidental water pollution shall be implemented. Particular emphasis should be placed on erosion control and preventing sediment resuspension during dredging of fill material and its placement into the existing watercourse.
2. Native field stone or quarry rock should be used for riprap material. If concrete is used, any reinforcing bars shall be cut off flush with the concrete surface.
3. Bank stabilization with toe protection should be provided for the right downstream bank. Submitted plans show the finished slope to be 1:1. This steep slope warrants some degree of bank protection.

Dudley M. Hanson
November 3, 1987
Page 2

4. Coordination between IBP Inc. in Storm Lake and the applicant must be carried out regarding the potential impacts to the stream flow gaging equipment located at the Highway 7 bridge. This gage is used by IBP to determine applicable effluent levels necessary to prevent water quality standards violations. The project's realignment of stream flow patterns will likely alter the gage calibration.

Sincerely,



KEITH BRIDSON, P.E., SUPERVISOR
WATER QUALITY PLANNING SECTION

KB/mjt/M307MJT.18

cc: Iowa Department of Transportation
Darrell Hayes, DNR Coord. & Info. Div.
Bill Bandurski, DNR EPD Flood Plain Section
Bill McAllister, IBP Inc., Dakota City, Nebraska

CONVERSATION RECORD			TIME 1:00 pm	DATE 11-13-87
TYPE	<input type="checkbox"/> VISIT	<input checked="" type="checkbox"/> CONFERENCE	<input type="checkbox"/> TELEPHONE	
			<input type="checkbox"/> INCOMING <input type="checkbox"/> OUTGOING	
Location of Visit/Conference: <u>R.I.D. - PD-F BRANCH</u>				
NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU		ORGANIZATION (Office, dept., bureau, etc.)	TELEPHONE NO.	
<u>T. KIRKEENG / M. MARTEUS</u>		<u>ED-HW</u>	<u>276</u>	
SUBJECT				
<u>N. ZACCOON RIVER - HWY 7 BRIDGE - SEC A</u>				
<u>BUENA VISTA Co., IA.</u>				
SUMMARY				

PURSUANT TO THE CONDITIONS SET FORTH BY THE IOWA DEPT. OF NATURAL RESOURCES FOR SECTION 401 WATER QUALITY CERTIFICATION IN THEIR ISSUANCE LETTER DATED NOV. 3, 1987, (CONDITION #3) - "BANK STABILIZATION WITH THE PROTECTION SHOULD BE PROVIDED FOR THE RIGHT DOWNSTREAM BANK" - - AFTER A DISCUSSION ON THIS MATTER WITH D. BORCK (ED-DG), IT WAS DECIDED TO CHANGE THE PROJECT DESIGN (TYPICAL SECTION PLATE) TO SHOW A 1:2.5 SLOPE ON THE FINISHED RIGHT BANK WITH SEEDING, TO SATISFY THE D.N.R.'S REQUEST CONDITION. ACCORDING TO ED-HW, THE HYDRAULIC DESIGN OF THE RIVER CHANNEL WILL NOT CHANGE DUE TO THE SLOPE CHANGE ON THE RIGHT BANK, AND SEEDING SHOULD PROVIDE ADEQUATE EROSION STABILIZATION, SINCE THE EXISTING EROSION IS PRONE TOWARDS THE EAST BANK, WHERE ACTION REQUIRED WE ARE PROVIDING RIPRAP PROTECTION.

- WILL FOLLOW-UP THIS CHANGE BY COORDINATION WITH THE D.N.R.

NAME OF PERSON DOCUMENTING CONVERSATION	SIGNATURE	DATE
<u>T. BALES</u>	<u>T. BALES PD-F</u>	<u>11-13-87</u>
ACTION TAKEN		

SIGNATURE	TITLE	DATE

CONVERSATION RECORD

TIME

2:00 pm

DATE

18 NOV '87

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING☒ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

DAVE ROTSCHAFER

ORGANIZATION (Office, dept., bureau, etc.)

MAINTENANCE CHIEF
IBP INC. LAKE, IA

TELEPHONE NO.

(712) 7433

732-7477

SUBJECT

NORTH RACCOON RIVER - HWY 7 BRIDGE - SEC 14

BUENA VISTA CO., IA.

SUMMARY

I CALLED MR. ROTSCHAFER TO MAKE HIM AWARE OF OUR PROPOSED PROJECT AND TO DISCUSS THE CONDITIONS, PERTINENT TO THE DNR'S ISSUANCE OF A SEC 401 WATER QUALITY CERTIFICATION FOR THE PROJECT, WHICH PERTAIN TO THE CALIBRATION OF A FLOW GAGE MOUNTED ON THE SOUTH CENTER D.S. PIER OF THE HWY. 7 BRIDGE., AND THE POSSIBLE EFFECT THE PROPOSED PROJECT MAY HAVE UPON THIS CALIBRATION. MR. ROTSCHAFER SAID THAT THE U.S. G.S. IS RESPONSIBLE FOR CALIBRATING THE GAGE AND HE SAID THAT IT HAS BEEN CALIBRATED SEVERAL TIMES SINCE IT WAS ORIGINALLY INSTALLED. HE SAID THAT IT WAS NOT THAT BIG OF A PROBLEM TO DO. I TOLD HIM THAT I WOULD PUT HIM ON OUR MAILING LIST FOR THE SEC 14 REPORT AND THAT IF THE PROJECT GETS APPROVED FOR CONSTRUCTION, HE'D BE CONTACTED TO ATTEND THE PRE-CONSTRUCTION

ACTION REQUIRED MEETING.

- CONTACT D.N.R. & DISCUSS THE ABOVE WITH THEM REGARDING POSSIBLE RECALIBRATION OF THE GAGE

NAME OF PERSON DOCUMENTING CONVERSATION

AFTER CONSTRUCTION
T. BALES

SIGNATURE

CENCR-
T.S. Bales PD-F

DATE

11-18-87

ACTION TAKEN

THE ABOVE ACTION REQD. WAS CARRIED OUT PLUS A RECONTACT WAS MADE TO MR. ROTSCHAFER (IBP INC.) ASKING HIM TO CONTACT U.S.G.S. REGARDING POSSIBLE EFFECTS THE PROPOSED PROJECT MIGHT HAVE UPON THE CALIBRATION OF THE GAGE AND POSSIBLE COSTS FOR SUCH WORK.

SIGNATURE

T.S. Bales

TITLE

PD-F

DATE

11-18-87

50271-101

U.S. G.P.O. 1985-485-494

CONVERSATION RECORD

OPTIONAL FORM 271 (12-76)
DEPARTMENT OF DEFENSE

CONVERSATION RECORD

TIME

10:00 AM

DATE

11-24-87

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING☐ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

MR. DAVE ROTSCHAFER

ORGANIZATION (Office, dept., bureau, etc.)

FACILITIES Supt. IBP, INC. STORM LAKE, IA.

TELEPHONE NO.

(712) 732-7477

SUBJECT

SEC 14 BANK PROTECTION - N. RACCOON RIVER, HWY. 7

BRIDGE, BUENA VISTA CO., IOWA.

SUMMARY

MR. ROTSCHAFER CALLED TO INFORM ME THAT HE HAD A DISCUSSION WITH MR. AL CONKLING AT THE U.S. G.S. OFFICE IN FT. DODGE, IOWA, CONCERNING THE IMPACT THE SUBJECT PROJECT MIGHT HAVE UPON THE CALIBRATION OF THE IBP FLOW-MONITORING GAGE, MOUNTED ON THE DOWNSTREAM CENTER PIER OF THE HWY 7 BRIDGE. MR. CONKLING TOLD MR. ROTSCHAFER THAT HE DID NOT THINK THE GAGE WOULD BE DAMAGED OR ALTERED BY THE CONSTRUCTION OF THE PROJECT TO WARRANT RECALIBRATION, AND THEREFORE, THERE WOULD BE NO COST FOR THIS ACTION. (U.S. G.S. IS FAMILIAR WITH THE GAGE AND HAS RECALIBRATED IT IN THE PAST, FOR I.B.P.)

ACTION REQUIRED

INFORM IOWA D.N.R. OF THE ABOVE

PURSUANT TO THE
CONDITIONS FOR
ISSUANCE OF SEC 401
WATER QUAL. CERT.

11-3-87

NAME OF PERSON DOCUMENTING CONVERSATION

SIGNATURE

DATE

T. BALES

T. Bales PD-F

11-24-87

ACTION TAKEN

SIGNATURE

TITLE

DATE

50271-101

U.S. G.P.O. 1985-485-494

CONVERSATION RECORD

OPTIONAL FORM 271 (12-76)
DEPARTMENT OF DEFENSE

CONVERSATION RECORD

TIME
10:30DATE
11-24-87

TYPE

☐ VISIT☐ CONFERENCE☒ TELEPHONE☐ INCOMING
☒ OUTGOING

ROUTING

NAME/SYMBOL INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT
WITH YOU

RALPH TURKLE

ORGANIZATION (Office, Dept., Bureau,
etc.)IOWA
D.N.R.

TELEPHONE NO.

(515)
281-5145

SUBJECT

SEC 14 BANK PROTECTION - N. RACCOON RIVER - HWY. 7
BRIDGE, BUENA VISTA CO., IA. - SEC. 401 CERTIFICATION

SUMMARY

ICALLED MR. TURKLE TO DISCUSS THE CONDITIONS SET FORTH BY THE DNR IN THEIR SEC 401 CERTIFICATION ISSUANCE LETTER DATED 3 NOV. 1987, FOR THE SUBJECT PROJECT. CONDITIONS NO. 1 & 2 WILL BE MET FULLY. AFTER CAREFUL REANALYSIS OF CONDITION NO. 3 BY CORPS PLANNING, HYDRAULICS, ENGINEERING & DESIGN BRANCHES, IT WAS DECIDED, WITH D.N.R. CONCURRENCE, THAT THE FINISHED SLOPE OF THE WEST BANK IN THE PROJECT AREA, WILL BE GRADED & SHAPED TO A 1 V ON 2.5 H SLOPE AND SEEDED WITH NATIVE REED CANARY GRASS FOR BANK STABILIZATION. COMPLIANCE WITH D.N.R. CONDITION NO. 4 HAS BEEN MET THRU DISCUSSIONS WITH I.B.P. INC., U.S.G.S., & THE D.N.R. THE I.B.P. INC. STREAM FLOW GAGE MOUNTED ON THE DOWNSTREAM CENTER PIER OF THE HWY. 7 BRIDGE, WAS ORIGINALLY SETUP & CALIBRATED BY THE U.S.G.S. OFFICE IN FT. DODGE, IOWA, AND ACCORDING TO THEM, THE GAGE WILL NOT BE IN DANGER OF LOSING ITS CALIBRATION DUE TO THE CONST. OF THE SUBJECT PROJECT. I.B.P., HOWEVER, WILL GET A COPY OF OUR SEC. 14 REPORT AND WILL BE NOTIFIED TO PARTICIPATE IN THE PRE-CONST. MEETING.

NAME OF PERSON DOCUMENTING CONVERSATION

T. Baker

SIGNATURE

C.O.E.
PD-F

DATE

11-24-87

ACTION TAKEN

PURSUANT TO MEETING, CONDITION NO. 4 ABOVE, SEE TELEPHONE CONVERSATION RECORD BETWEEN I.B.P. INC. (MR. ROTSHAFFER) & THE CORPS, DATED 18 NOV. '87.

SIGNATURE

C.O.E.
PD-F

TITLE

Civ. Engineer

DATE

11-24-87

50271-101

★ U.S. G.P.O. 1985-485-494

CONVERSATION RECORD

OPTIONAL FORM 271 (12-76)
DEPARTMENT OF DEFENSE



Iowa Department of Transportation

800 Lincoln Way, Ames, Iowa 50010 515/239-1124

December 16, 1987

Ref. No. 010

Colonel Neil A. Smart
District Engineer
U.S. Army Engineer District,
Rock Island
Clock Tower Building
P O Box 2004
Rock Island, Illinois 61204-2004

DEC 18 1987

NCROD-S

Dear Colonel Smart:

The Iowa Department of Transportation (I.D.O.T.), referred to as STATE, has reviewed the draft of the proposed Local Cooperation Agreement covering streambank erosion control on the North Raccoon River at Iowa Highway No. 7 bridge. The Agreement includes the following obligations to be carried out by the State:

- a) Provide, without cost to the Government, during the period of construction, all lands, easements, right-of-way, and dredged material disposal areas, and perform all relocations and alteration of buildings, utilities (except those which pass under or through the line of protection), highways, railroads, bridges (except railroad bridges), sewers, and related and special facilities determined by the Government to be necessary for construction of the project.
- b) Make a cash payment of not less than 5 percent of total project costs during the period of construction, regardless of the value of the items in a. above. If the value of the items in a. above is less than 20 percent of total project costs, the STATE shall, during the period of construction, make such additional cash payments as are necessary to bring its total contribution in cash and value of lands, easements, rights-of-way, and utility and facility alterations and relocations, to an amount equal to 25 percent of total project costs.
- c) Pay all project costs in excess of the Federal statutory limitation of \$500,000.
- d) Hold and save the Government free from all damages arising from the construction, operation, and maintenance of the project, except for damages due to the fault or negligence of the Government or its contractors.

- e) Operate, maintain, replace, and rehabilitate the project or functional element thereof upon completion in accordance with regulations or directions prescribed by the Government.
- f) Comply with the applicable provisions of the Uniform Relocation Assistance and Real Property Acquisition Policies Act of 1970, Public Law 91-646, approved January 2, 1971, in acquiring lands, easements, and rights-of-way for construction and subsequent operation and maintenance of the project, and inform all affected persons of applicable benefits, policies, and procedures in connection with said Act.
- g) Comply with Section 601 of Title VI of the Civil Rights Act of 1964 (Public Law 88-352) and Department of Defense Directive 5500.11 issued pursuant thereto and published in Part 300 of Title 32, Code of Federal Regulations, as well as Army Regulation 600-7, entitled "Non-Discrimination on the Basis of Handicap and Programs and Activities Assisted or Conducted by the Department of the Army."
- h) Participate in and comply with applicable Federal flood plain management and flood insurance programs.
- i) Prior to construction, and in accordance with the provisions of Section 221 of Public Law 91-611, the STATE will enter into a contract with the Government whereby the STATE will grant the Government a right to enter, at reasonable times and in a reasonable manner, upon land which the STATE owns or controls for access to the project for the purpose of inspection, and, if necessary, for the purpose of completing, operating, repairing, maintaining, replacing or rehabilitating the project. If an inspection shows that the STATE for any reason is failing to fulfill its obligations under the Agreement without receiving prior written approval from the Government, the Government will send a written notice to the STATE. IF the STATE persists in such failure for 30 calendar days after receipt of the notice, then the Government shall have a right to enter, at reasonable times and in a reasonable manner, upon lands the STATE owns or controls for access to the project for the purpose of completing, operating, repairing, maintaining, replacing, or rehabilitating the project. No completion, operation, repair, maintenance, replacement, or rehabilitation by the Government shall operate to relieve the STATE of responsibility to meet its obligations as set forth in the Agreement, or to preclude the Government from pursuing any other remedy at law or

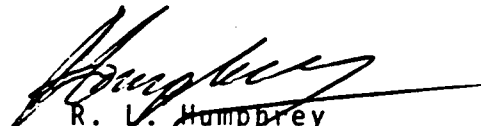
Page 3
December 16, 1987

equity to assure faithful performance pursuant to the Agreement.

The STATE is willing and able to pay its share of the total project costs. Sufficient funds are on hand or can be raised quickly, and the cash payment can be deposited directly with the Government upon demand by the Government.

This is to advise that if the Definite Project Report for this project is approved substantially in its present form as reviewed by the STATE and as submitted for approval by the Corps of Engineers' higher authority, the STATE is willing, and legally and financially able, to sign the referenced Local Cooperation Agreement which includes the obligations set forth above.

Very truly yours,


R. L. Humphrey
Highway Division Director
Chief Engineer

RLH:WAL/dlt
cc: G. Anderson
J. Bump
G. Solbeck

CONVERSATION RECORD

TIME

DATE

12 JANUARY 1988

TYPE

☐ VISIT

☐ CONFERENCE

☒ TELEPHONE

☒ INCOMING

☐ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

WAYNE FISCHER

ORGANIZATION (Office, Dept., Bureau, etc.)

US FWS ROCK

ISLAND FIELD OFFICE

TELEPHONE NO.

(309)

793-5800

SUBJECT

BUENA VISTA COUNTY, IOWA, NORTH RACON RIVER,

HIGHWAY 7 BRIDGE, SECT 14 PROJECT.

SUMMARY

(1) MR FISCHER WAS RETURNING MY EARLIER CALL.

(2) THE ROCK ISLAND DISTRICT HAD PREVIOUSLY CORRESPONDED WITH THE U.S. FWS BY LETTER PROVIDING A DESCRIPTION OF THE PROPOSED PROJECT AND THE AREA, AND A DISCUSSION OF POTENTIAL IMPACTS.

(3) MR FISCHER SAID HE DIDN'T THINK HIS AGENCY WOULD HAVE ANY MAJOR CONCERNS ABOUT THE PROJECT AS DESCRIBED.

(4) MR FISCHER CONCURRED WITH A DETERMINATION OF NO EFFECT ON ANY FEDERALLY LISTED ENDANGERED SPECIES.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

BOB VANDERJACK

SIGNATURE

Robert C Vanderjock

DATE

12 JAN 88

ACTION TAKEN

SIGNATURE

TITLE

DATE

CONVERSATION RECORD

TIME

DATE

13 JANUARY 1988

TYPE

☐ VISIT

☐ CONFERENCE

☒ TELEPHONE

☒ INCOMING

☐ OUTGOING

ROUTING

NAME/SYMBOL

INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

MIKE BRONOSKI

ORGANIZATION (Office, dept., bureau, etc.)

US EPA REGION 7
KANSAS CITY

TELEPHONE NO.

(913)
236-2823

SUBJECT

BUENA VISTA COUNTY, IOWA, NORTH RACON RIVER
HIGHWAY 7 BRIDGE, SECT 14 PROJECT

SUMMARY

- ① MR BRONOSKI WAS RETURNING MY EARLIER CALL.
- ② WE DISCUSSED THE SUBJECT PROJECT AND POTENTIAL IMPACTS.
- ③ MR BRONOSKI THOUGHT HIS AGENCY WOULD HAVE NO OBJECTIONS TO THE PROJECT.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

BOB VANDERJACK

SIGNATURE

Robert C. Vanderjack

DATE

13 JAN 88

ACTION TAKEN

SIGNATURE

TITLE

DATE

CONVERSATION RECORD

TIME

DATE

14 JANUARY 1988

TYPE

☐ VISIT

☐ CONFERENCE

☒ TELEPHONE

☐ INCOMING

☒ OUTGOING

ROUTING

NAME/SYMBOL	INT

Location of Visit/Conference:

NAME OF PERSON(S) CONTACTED OR IN CONTACT WITH YOU

DARRELL HAYES

ORGANIZATION (Office, dept., bureau, etc.)

IOWA DNR

TELEPHONE NO.

(515) 281-8675

SUBJECT

BUENA VISTA COUNTY, IOWA, NORTH RACON RIVER,
HIGHWAY 7 BRIDGE, SECTION 14 PROJECT.

SUMMARY

- (1) THE ROCK ISLAND DISTRICT HAD PREVIOUSLY CORRESPONDED WITH THE IOWA D.N.R. BY LETTER PROVIDING A DESCRIPTION OF THE PROPOSED PROJECT AND THE AREA, AND A DISCUSSION OF POTENTIAL IMPACTS.
- (2) MR HAYES DIDN'T THINK HIS AGENCY WOULD HAVE ANY MAJOR PROBLEMS WITH THE PROJECT AS PROPOSED.
- (3) HE RECOMMENDED THAT IF METHODS TO MINIMIZE SILTATION DURING CONSTRUCTION WERE IDENTIFIED THAT THEY BE EMPLOYED.
- (4) MR HAYES WAS IN CONCURRENCE WITH THE PROJECT DESIGN OF HAVING BOTH BANKS STABILIZED AFTER THE PROJECT WAS DONE, THE ERODED BANK BY RIPRAP AND THE OPPOSITE BANK BY SEEDING.

ACTION REQUIRED

NAME OF PERSON DOCUMENTING CONVERSATION

BOB VANDERSACK

SIGNATURE

Robert C. Vandeyack

DATE

14 JAN 88

ACTION TAKEN

SIGNATURE

TITLE

DATE

DISTRIBUTION LIST

DISTRIBUTION LIST
FOR
DEFINITE PROJECT REPORT
SECTION 14 EMERGENCY STREAMBANK PROTECTION
NORTH RACCOON RIVER
STATE HIGHWAY NO. 7 BRIDGE
BUENA VISTA COUNTY, IOWA

NO
COPIES

HONORABLE CHARLES E. GRASSLEY, UNITED STATES SENATE
WASHINGTON, DC 20510

HONORABLE TOM HARKIN, UNITED STATES SENATE
WASHINGTON DC 20510

HONORABLE CHARLES E. GRASSLEY, UNITED STATES SENATOR
721 FEDERAL BUILDING, 210 WALNUT STREET
DES MOINES, IA 50319

HONORABLE TOM HARKIN, UNITED STATES SENATOR
733 FEDERAL BUILDING, 210 WALNUT STREET
DES MOINES IA 50309

HONORABLE FRED BRANDY, HOUSE OF REPRESENTATIVES
WASHINGTON DC 20515

HONORABLE FRED BRANDY, REPRESENTATIVE IN CONGRESS
518 PIERCE, SIOUX CITY IA 51101

DIRECTOR, ADVISORY COUNCIL ON HISTORIC PRESERV
OLD PC BLDG #8 9, 1100 PENNSYLVANIA AVENUE NW
WASHINGTON DC 20004

DIRECTOR, DEPT OF ECOLOGY & CONSERVATION
DEPT OF COMMERCE, RM 5613 (PP/10), 14TH & CONSTITUTION AVE., NW
WASHINGTON, DC 20220

FEDERAL EMERGENCY MANAGEMENT ADMIN, 501 C STREET SW
ROOM 711, WASHINGTON DC 20472

OFFICE OF ENVIRONMENTAL PROJ REVIEW, DEPARTMENT OF INTERIOR
19TH & C STREETS NW - ROOM 4241, WASHINGTON DC 20240

DIRECTOR, OFFICE OF HABITAT PROTECTION
NATIONAL MARINE FISHERIES SERVICE, NOAA
WASHINGTON DC 20236

MR RICHARD NELSON - FIELD SUPERV., U.S. FISH & WILDLIFE SERVICE
1-31 SECOND AVE. - 2ND FLOOR, ROCK ISLAND, IL 61201

18

*SINGLE COPIES DISTRIBUTED EXCEPT AS INDICATED

DISTRIBUTION -- EXTERNAL

NO
COPIES

DIVISION ADMINISTRATOR, FEDERAL HIGHWAY ADMINISTRATION
PO BOX 527, 6TH AND KELLOGG STREET
AMES IA 50010

STATE CONSERVATIONIST, SOIL CONSERVATION SERVICE USDA
693 FEDERAL BLDG, 210 WALNUT STREET
DES MOINES IA 50309

2

GEOLOGICAL SURVEY BUREAU, ENERGY AND GEOLOGICAL RESOURCES DIVN
IOWA DEPT OF NATURAL RESOURCES, 104 NORTH CAPITOL STREET
IOWA CITY IA 52240

REGIONAL DIRECTOR, REGION 3, U.S. FISH AND WILDLIFE SERVICE
FEDERAL BLDG FORT SNELLING, TWIN CITIES MN 55111

MR MORRIS KAY - ADMINISTRATOR, U.S. ENVIRONMENTAL PROTECTION AGENCY
726 MINNESOTA AVENUE, KANSAS CITY KS 64111

3

DIRECTOR, FEDERAL EMERGENCY MANAGEMENT AGENCY
REGION VII, 911 WALNUT STREET - ROOM 300
KANSAS CITY MO 64116

REGIONAL FORESTER, FOREST SERVICE
US DEPT OF AGRICULTURE, 31 W WISCONSIN AVE-SUITE 500
MILWAUKEE WI 53203

2

HONORABLE TERRY BRANSTAD, GOVERNOR OF IOWA
STATE CAPITOL, DES MOINES, IA 50319

MR STEVEN P MC CANN - DIRECTOR, IOWA DEPT OF ECONOMIC DEVELOPMENT
DIVN OF COMMUNITY PROGRESS, 200 EAST GRAND
DES MOINES IA 50319

4

IOWA DEPARTMENT OF ECONOMIC DEVELOPMENT
DIVISION OF COMMUNITY PROGRESS
200 EAST GRAND AVENUE
DES MOINES, IOWA 50309

2

DIRECTOR, IOWA DEPARTMENT OF TRANSPORTATION
OFFICE OF POLICY, 800 LINCOLN WAY
AMES, IA 50010

*SINGLE COPIES DISTRIBUTED EXCEPT AS INDICATED

DISTRIBUTION -- EXTERNAL

NO
COPIES

DIRECTOR, IOWA DEPT OF SOIL CONSERVATION
WALLACE STATE OFFICE BLDG, 901 EAST GRAND AVENUE
DES MOINES IA 50319

MR DAVID CROSSON, STATE HISTORIC PRESERVATION OFFICE
HISTORICAL BUILDING, EAST 10TH & GRAND AVENUE
DES MOINES, IA 50319

HONORABLE LEAN FUHRMAN, IOWA SENATOR-5TH DISTRICT
STATE HOUSE, DES MOINES IA 50319

HONORABLE RUSSELL J EDDIE, IOWA REPRESENTATIVE-10TH DISTRICT
STATE HOUSE, DES MOINES IA 50319

COUNTY CLERK, BUENA VISTA CO COURT HOUSE
STORM LAKE IA 50588

COUNTY ENGINEER, BUENA VISTA CO COURT HOUSE
STORM LAKE IA 50588

STORM LAKE PUBLIC LIBRARY, 609 MAYOR
STORM LAKE IA 50588

JANE ELDER, THE SIERRA CLUB
214 N HENRY ST SUITE 200, MADISON WI 53703

DAVE ROTSCHAFER
I.B.P. INC.
FLINDT DRIVE
STORM LAKE, IOWA 50588

-SINGLE COPIES DISTRIBUTED EXCEPT AS INDICATED

DISTRIBUTION -- INTERNAL

COMMANDER, US ARMY ENGINEER DISTRICT, ROCK ISLAND, CLOCK
TOWER BLDG., ROCK ISLAND, IL 61204-2004

ATTN: CENCR-DE	CENCR-PD-E
CENCR-RE	CENCR-PD-P
CENCR-ED	CENCR-CD
CENCR-ED-D	CENCR-OD
CENCR-ED-H	CENCR-IM-C (3)
CENCR-PD	CENCR-PA